

STN

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18 attachments

FILE 'CAPLUS, MEDLINE' ENTERED AT 14:15:13 ON 03 JAN 2001

L1 4 S BETA BETA-CAROTENE 15,15-DIOXYGENASE

L2 93 S WYSS

L3 1 S L2 AND CAROTENE

L4 99 S CAROTENE AND DIOXYGENASE

L5 9 S L4 A

Dialog

Set Items Description

?s carotene (1n) dioxygenase
63661 CAROTENE
20848 DIOXYGENASE
S1 120 CAROTENE (1N) DIOXYGENASE
?s s1 (10n) beta
120 S1
3259781 BETA
S2 70 S1 (10N) BETA
?s beta (10n) carotene (10n) dioxygenase
3259781 BETA
63661 CAROTENE
20848 DIOXYGENASE
S3 245 BETA (10N) CAROTENE (10N) DIOXYGENASE
?s beta (10n) carotene
3259781 BETA
63661 CAROTENE
S4 47883 BETA (10N) CAROTENE
?s s4 (10n) dioxygenase
47883 S4
20848 DIOXYGENASE
S5 238 S4 (10N) DIOXYGENASE
?t s2/3,k/1-70
2/3,K/6 (Item 6 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)
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**In vitro and in vivo inhibition of *beta*-*carotene* *dioxygenase* activity
by canthaxanthin in rat intestine.**

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JOURNAL: Archives of Biochemistry and Biophysics 348 (2):p233-238 Dec. 15,
1997

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RECORD TYPE: Abstract

LANGUAGE: English

**In vitro and in vivo inhibition of *beta*-*carotene* *dioxygenase* activity
by canthaxanthin in rat intestine.**

ABSTRACT: *beta*-*Carotene* *dioxygenase* catalyzes the conversion of
provitamin A carotenoids to vitamin A in mammalian tissues. Whether the
enzyme can also cleave non-provitamin A carotenoids to retinoid analogs
with biological activities is still unclear. We investigated (i)
substrate specificities of *beta*-*carotene* *dioxygenase* toward
provitamin A and non-provitamin A carotenoids and (ii) potential
antagonistic effects of non-provitamin A carotenoids on beta-carotene
conversion to vitamin A...

...carotene for intestinal absorption and inhibits the conversion of
beta-carotene to vitamin A. Thus, we suggest that although canthaxanthin
is not a substrate for *beta*-*carotene* *dioxygenase*, it is likely to
affect the activity of provitamin A carotenoids by direct interaction
with the enzyme.

DESCRIPTORS:

CHEMICALS & BIOCHEMICALS: *beta*-*carotene* *dioxygenase*--

2/3,K/13 (Item 3 from file: 34)

DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

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08623350 Genuine Article#: 308DP No. References: 30

**Title: Filling the gap in vitamin A research - Molecular identification of
an enzyme cleaving beta-carotene to retinal**

Author(s): vonLintig J; Vogt K (REPRINT)
 Corporate Source: UNIV FREIBURG, INST BIOL NEUROBIOL & TIERPHYSIOL 1,
 HAUPTSTR 1/D-79104 FREIBURG//GERMANY/ (REPRINT); UNIV FREIBURG, INST
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...Abstract: is the oxidative cleavage of beta-carotene; however, this enzymatic step has resisted molecular analysis. A novel approach enabled us to clone and identify a *beta*-carotene *dioxygenase* from *Drosophila melanogaster*, expressing it into the background of a *beta*-carotene (provitamin A)-synthesizing and -accumulating *Escherichia coli* strain. The carotene-cleaving enzyme, identified here for the first time on the molecular level, is the...

2/3,K/28 (Item 3 from file: 71)
 DIALOG(R)File 71:ELSEVIER BIOBASE
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Filling the gap in vitamin A research. Molecular identification of an enzyme cleaving beta-carotene to retinal
 Von Lintig J.; Vogt K.
 ADDRESS: J. Von Lintig, Albert-Ludwig Universitat Freiburg, Institut fur Biologie I, Neurobiologie und Tierphysiologie, Hauptstrasse 1, D-79104 Freiburg, Germany
 EMAIL: lintig@unifreiburg.de
 Journal: Journal of Biological Chemistry, 275/16 (11915-11920), 2000, United States
 PUBLICATION DATE: April 21, 2000
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 ISSN: 0021-9258
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 NO. OF REFERENCES: 30

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Ref	Items	Index-term
E1	2	AU=WYSPIANSKI J O
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E3	2	*AU=WYSS
E4	92	AU=WYSS A
E5	2	AU=WYSS A N
E6	36	AU=WYSS A R
E7	4	AU=WYSS A W
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E9	13	AU=WYSS A.R.
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E12	1	AU=WYSS AND, MURIEL

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 ?s e4 and s3
 92 AU=WYSS A
 245 S3
 S14 3 AU="WYSS A" AND S3
 ?e au=woggon

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?e au=bachmann H

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?e au=hunziker w

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E8	1	AU=HUNZIKER WILLY

E9 5 AU=HUNZIKER
E10 4 AU=HUNZIKER Y.
E11 2 AU=HUNZIKER YVONNE
E12 1 AU=HUNZIKER-DEAN J

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?s s3 and e3

245 S3

128 AU=HUNZIKER W.

S20 2 S3 AND AU="HUNZIKER W."

?t s14/3,k/all